## **ABSTRACT**

A system for performing anastomosis between a graft vessel and a target vessel includes a tissue effector that may be configured to deploy a user-selectable number of connectors. The system includes an anvil that enters the wall of the target vessel through an entry hole that is spaced apart from the anastomosis site, and at least one anvil entry hole sealer may be utilized to substantially seal the anvil entry hole upon withdrawal of the anvil. The system may include a shield and a cutter, both of which are movable relative to the anvil, where the shield is configured to protect the graft vessel from the cutter. The cutter may include an incising element movable from a stowed position to an active position.